

38, 40 are] arranged to provide [the requisite] auxiliary power.

Claim 2. (Amended) [A] The plant as claimed in claim 1, [characterized in that] wherein the conductor and the first layer each have a corresponding potential and the potential on the first layer is substantially equal to the potential on the conductor.

Claim 3. (Amended) [A] The plant as claimed in claim 1 [or claim 2, characterized in that] , wherein the second layer is arranged to form a substantially equipotential surface surrounding the conductor.

Claim 4. (Amended) [A] The plant as claimed in claim 3, [characterized in that] wherein the second layer is connected to a predetermined potential.

Claim 5. (Amended) [A] The plant as claimed in claim 4, [characterized in that] wherein said predetermined potential is earth potential.

Claim 6. (Amended) [A] The plant as claimed in [any of the preceding claims, characterized in that] claim 1, wherein at least two adjacent layers of the [machine's] winding have substantially [equally] the same, relatively large coefficients of thermal expansion.

Claim 7. (Amended) [A] The plant as claimed in [any of the preceding claims, characterized in that] claim 1, wherein the conductor comprises a number of [strands] conductive elements, at least some of which are in electric contact with each other.

Claim 8. (Amended) [A] The plant as claimed in [any of the preceding claims, characterized in that] claim 1, wherein each of said [three] layers has a contact surface and each is firmly joined to an adjacent [layers] layer along substantially its entire contact surface.

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Claim 9. (Amended) [A] The plant as claimed in [any of the preceding claims, characterized in that] claim 1, wherein said layers are arranged to adhere to each other even when the insulated conductor is bent.

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Claim 10. (Amended) An electric power plant comprising at least one electric machine of alternating current type [designed to be connected directly] for direct connection to a distribution or transmission network and comprising at least one magnetic core and at least one electric winding, [characterized in that the winding is] formed [from] of a cable comprising one or more current-carrying conductors, each conductor having a number of [strands] conductive elements, an inner semiconducting layer provided around each conductor, an insulating layer of solid insulating material provided around said inner semiconducting layer, and an outer semiconducting layer provided around the Insulating layer, and [in that] auxiliary power means [are arranged to provide the requisite] for providing auxiliary power.

Claim 11. (Amended) [A] The plant as claimed in claim 10, [characterized in that] wherein said cable comprises a sheath.

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Claim 12. (Amended) [A] The plant as claimed in [any of claims 1-11, characterized in that] claim 1, wherein the electric machine is a rotary electric machine and [in that] wherein the stator is provided with at least two windings [designed] for different voltages, one of [which] said windings [is] being arranged as auxiliary power winding to generate auxiliary power.

Claim 13. (Amended) [A] The plant as claimed in claim 12, [characterized in that] wherein the auxiliary power winding comprises at least one electric conductor, a first layer with semi-conducting properties surrounding the conductor, a solid insulating layer surrounding the first layer and a second layer with semiconducting properties surrounding the insulating layer.

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 Claim 14. (Amended) [A] The plant as claimed in claim 12 [or claim 13, characterized in that] , wherein one of said stator [winding (6)] windings is dimensioned for voltages in the range of 36 kV - 800 kV, [whereas] and the auxiliary power winding [(22)] is dimensioned for voltages in the range of 400V - 20kV.

Claim 15. (Amended) [A] The plant as claimed in [any of claims 12-14, characterized in that] claim 12, wherein the auxiliary power winding [(22)] is dimensioned to supply voltage within at least one of the following discrete voltage ranges: 380-420 V, 650-725 V, 3.1-3.5 kV, 6.2-7.0 kV or 9.5-10.5 kV.

Claim 16. (Amended) [A] The plant as claimed in [any of claims 12-14, characterized in that] claim 12, wherein the auxiliary power winding [(22)] is dimensioned to supply a voltage arranged to be transformed to a voltage within at least one of the following discrete voltage ranges: 380-420 V, 650-725 V, 3.1-3.5 kV, 6.2-7.0 kV or 9.5-10.5 kV.

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 Claim 17. (Amended) [A] The plant as claimed in [any of claims 12-16, characterized in that] claim 12, wherein the auxiliary power winding [(22)] is comprises a three-phase winding.

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 Claim 18. (Amended) [A] The plant as claimed in [any of claims 12-17, characterized in that] claim 12, wherein the stator includes adjacent teeth separated by a slot having a bottom and the auxiliary power winding [(22)] is [placed] located in the bottom of [a] the slot [(7)] formed between two adjacent stator teeth[(4)].

Claim 19. (Amended) [A] The plant as claimed in claim 18, [characterized in that] wherein an extra winding space is provided in the bottom of the slot and the auxiliary power winding [(22)] is placed in [an] the extra winding space [(23)] in the stator [(1)], and is oriented radially in relation to the stator winding[(6)].

Claim 21. (Amended) [A] The plant as claimed in [any of claims 1-11, characterized in that] claim 1, wherein the electric machine is a generator having a generator winding and [in that] the auxiliary power means [comprise] comprises a tapping terminal on the generator winding for tapping auxiliary power, to form an auxiliary power source.

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Claim 23. (Amended) [A] The plant as claimed in claim 22, [characterized in that] wherein the auxiliary power generator is provided with at least one winding comprising at least one electric conductor, a first layer with semiconducting properties surrounding the conductor, a solid insulating layer surrounding the first layer and a second layer with semiconducting properties surrounding the insulating layer.

Claim 24. (Amended) [A] The plant as claimed in [any of claims 1-11,
characterized in that] claim 1, wherein the auxiliary power means [comprise] comprises
[as auxiliary power source] an extra secondary winding of an earthing transformer as an
auxiliary power source connected to a busbar for [several] a plurality of generators.

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A' cont. transformer [connected to a busbar for several generators is provided with] includes a tapping terminal for extracting auxiliary power.

Claim 26. (Amended) [A] The plant as claimed in claim 24 [or claim 25, characterized in that] , wherein at least one of the [transformer's] transformer windings comprises at least one electric conductor, a first layer with semiconducting properties surrounding the conductor, a solid insulating layer surrounding the first layer and a second layer with semiconducting properties surrounding the insulating layer.

Claim 27. (Amended) [A] The plant as claimed in [any of the preceding claims, characterized in that] claim 26, wherein the auxiliary power means [comprise] comprises at least one auxiliary power source [which is] connected to an auxiliary power busbar for distribution of auxiliary power, via power electronics equipment to keep the voltage on the auxiliary power busbar constant, the power electronics equipment being provided with a direct voltage intermediate link, for connection to [which] a back-up voltage [can be connected if] as necessary.

Claim 28. (Amended) [A] The plant as claimed in claim 27, [characterized in that] wherein a battery is connected to the direct voltage intermediate link to supply a predetermined back-up voltage to the direct voltage intermediate link if its voltage level falls below said predetermined level.

Claim 29. (Amended) [A] The plant as claimed in claim 27 [or claim 28, characterized in that] wherein the power electronics equipment comprises an input stage for rectifying alternating voltage obtained from the auxiliary power source, for generation of a direct voltage on the intermediate link in the power electronics equipment.

Claim 30. (Amended) [A] The plant as claimed in claim 29, [characterized in that] wherein the input stage comprises a diode bridge.

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Claim 31. (Amended) [A] The plant as claimed in claim 29, [characterized in that] wherein the input stage and an output stage included in the power electronics equipment each comprise a converter equipment.

Claim 32. (Amended) [A] The plant as claimed in claim 29, [characterized in that] wherein the input stage is designed to generate a direct voltage on the intermediate link, with a load- dependent voltage level.

Claim 33. (Amended) [A] The plant as claimed in claim 32, [characterized in that] wherein the input stage comprises a resistor and an inductor to produce a load-dependent voltage drop.

Claim 34. (Amended) [A] The plant as claimed in claim 33, [characterized in that] wherein the input stage is [so designed] such that, when [the] a maximum permitted current is supplied, [the] a voltage on the direct voltage intermediate lies below said back-up voltage.

Claim 35. (Amended) [A] The plant as claimed in [any of claims 27-34, characterized in that] claim 27, wherein a plurality of generators with extra windings for generating auxiliary power are connected in parallel to the direct voltage intermediate link, each via [its own] a corresponding input stage in the auxiliary electronics equipment.

Claim 36. (Amended) [A] The plant as claimed in [any of claims 27-35, characterized in that] claim 27, wherein the auxiliary power busbar [can be] is optionally supplied from additional sources, [such as] including external supply sources or generators driven by diesel engines.

Claim 37. (Amended) [A] The plant as claimed in [any of claims 27-36, characterized in that] claim 27, wherein at least one alternating voltage busbar and at least

one direct voltage busbar for distributing auxiliary power are supplied both from a battery and from the auxiliary power busbar via a converter or from the intermediate link of the power electronics equipment.

Claim 38. (Amended) [A] The plant as claimed in claim 12 [or claim 13, characterized in that] , wherein the rotary electric machine is arranged to be excited from the auxiliary power winding.

Claim 39. (Amended) [A] The plant as claimed in [any of claims 27-37, characterized in that] claim 27, wherein the electric machine is arranged to be excited with the aid of a chopper circuit, the input and output being galvanically separated and the input being connected to the direct voltage intermediate link.

Claim 40. (Amended) [A] The plant as claimed in claim 22 [or claim 23, characterized in that] , wherein the auxiliary power generator is connected to an auxiliary power busbar, and [in that] an integral motor is arranged to keep the speed of the auxiliary power generator constant when variations appear in the voltage and/or frequency of the supply network

Claim 41. (Amended) [A] The plant as claimed in claim 22 [or claim 23, characterized in that] , wherein the power [electronic] electronics equipment is arranged for optional control of power flow from auxiliary power generator to auxiliary power busbar or from auxiliary power busbar to auxiliary power generator.

Claim 42. (Amended) [A] The plant as claimed in claim 41, wherein the electric machine is a synchronous machine, [characterized in that] wherein a [the] field winding of the auxiliary power generator can be short-circuited and in that its stator side can be supplied with a three-phase voltage having a phase position and a frequency, such that the auxiliary power generator functions as an asynchronous machine with direction of rotation for maximum braking torque.

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Claim 43. (Amended) [A] The plant as claimed in claim 41, wherein the electric machine is a synchronous machine, [characterized in that] wherein a [the] field winding of the auxiliary power generator can be short-circuited and [in that] at least one stator winding in the auxiliary power generator can be supplied with a direct current.

Claim 44. (Amended) [A] The plant as claimed in claim 43, [characterized in that] wherein at least one of a frequency changer [or] and a separate thyristor current converter for single-quadrant operation is arranged to supply at least one stator winding of the auxiliary power generator with direct current.

Claim 45. (Amended) [A] The plant as claimed in [any of claims 41-44, characterized in that] claim 41, wherein the auxiliary power generator is designed with a pole number suitable for frequency adaptation.

Claim 46. (Amended) [A] The plant as claimed in claim 12 [or claim 13 characterized in that] , wherein the power electronics equipment is arranged for optional control of power flow from auxiliary power winding to auxiliary power busbar or from auxiliary power busbar to auxiliary winding.

Claim 47. (Amended) [A] The plant as claimed in claim 46, wherein the electric machine is a synchronous machine, [characterized in that] and wherein a [the] field winding of the machine can be short-circuited and [in that its] an auxiliary winding can be supplied with a three-phase voltage having a phase position and a frequency, such that the synchronous machine functions as an asynchronous machine with a direction of rotation for maximum braking torque.

Claim 48. (Amended) [A] The plant as claimed in claim 46, wherein the electric machine is a synchronous machine, [characterized in that] and wherein a [the] field

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winding of the machine can be short-circuited and [in that] at least one [of its] auxiliary [windings] winding thereof can be supplied with direct current.

Claim 49. (Amended) [A] The plant as claimed in claim 46, wherein the electric machine is a synchronous machine, [characterized in that] and wherein at least one of a frequency changer [or] and a separate thyristor current converter for single-quadrant operation is arranged to supply an auxiliary power winding in the machine with direct current.

Claim 50. (Amended) [A] The plant as claimed in [any of claims 27-37 characterized in that] claim 27, wherein the electric machine is arranged to be excited from a separately driven auxiliary power generator.

Claim 51. (Amended) [A] The plant as claimed in [any of claims 17-21, 22 or 23, characterized in that] claim 17, wherein an auxiliary power generator or generator with auxiliary power winding is connected to an auxiliary power busbar, and [in that] wherein actual loads are connected to integral motors, the speed being kept constant when variations occur in the voltage and/or frequency of the supply network.

Claim 52. (Amended) [A] The plant as claimed in [any of claims 1-24, characterized in that] claim 1, wherein the machine with auxiliary power winding, connected to an auxiliary power busbar, can be driven in three simultaneous operation modes, namely a synchronous motor mode for driving a turbine part in air or vacuum, a synchronous compensator mode for generating reactive power for maintaining the voltage on the external network, and a transformer mode for transmitting power to the auxiliary power busbar.

Claim 53. (Amended) [A] The plant as claimed in [any of claims 1-24, characterized in that] claim 1, wherein the machine with separate auxiliary power generator, connected to an auxiliary power busbar, can be driven in three simultaneous

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operation modes, namely a synchronous motor mode for driving a turbine part in air or vacuum, a synchronous compensator mode for generating reactive power for maintaining the voltage on the external network, and a transformer mode for transmitting power to the auxiliary power busbar.

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Claim 54. (Amended) [A procedure in an] An electric power plant comprising at least one rotary electric machine [(2, 4, 6, 8)] of alternating current type for connection [designed to be connected] directly to a distribution or transmission network and comprising at least one electric winding, [characterized in that] wherein the winding of the machine [(2, 4, 6, 8)] is formed of at least one electric conductor [(35)], a first layer [(13)] with semiconducting properties surrounding the conductor, a solid insulating layer [(37)] surrounding the first layer and a second layer [(15)] with semiconducting properties surrounding the insulating layer, and [in that] auxiliary power is generated with the aid of an extra winding on the stator.

Claim 55. (Amended) [A procedure in an] The electric power plant [comprising] according to claim 54, wherein the at least one electric machine [(2, 4, 8, 8)] of alternating current type comprises [in the form of] a generator [designed to be connected directly to a distribution or transmission network and] comprising at least one electric winding, [characterized in that] wherein the winding of the machine [(2, 4, 6, 8)] is formed of at least one electric conductor [(35)], a first layer [(13)] with semiconducting properties surrounding the conductor, a solid insulating layer [(37)] surrounding the first layer and a second layer [(15)] with semiconducting properties surrounding the insulating layer, and in that auxiliary power is tapped from a tapping terminal on the generator winding.

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Claim 57. (Amended) [A procedure in an] The electric power plant according to claim 54, comprising [at least one electric machine (2, 4, 6, 8) of alternating current type

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comprising at least one electric winding, as well as] an earthing transformer connected to a busbar [intended] for several generators, [characterized in that the winding of the machine (2, 4, 6, 8) is formed of at least one electric conductor (35), a first layer (13) with semiconducting properties surrounding the conductor, a solid insulating layer (37) surrounding the first layer and a second layer (15) with semiconducting properties surrounding the insulating layer], and wherein [in that] auxiliary power is extracted from an extra secondary winding of the earthing transformer.

Claim 58. (Amended) [A procedure in an] The electric power plant according to claim 54 comprising [at least one electric machine (2, 4, 6, 8) of alternating current type designed to be connected directly to a distribution or transmission network and comprising at least one electric winding, as well as] an earthing transformer connected to a busbar [intended] for several generators, [characterized in that the winding of the machine (2, 4, 6, 8) is formed of at least one electric conductor (35), a first layer (13) with semiconducting properties surrounding the conductor, a solid insulating layer (37) surrounding the first layer and a second layer (15) with semiconducting properties surrounding the insulating layer], and wherein [in that] auxiliary power is tapped from a tapping terminal of a transformer winding.

Claim 59. (Amended) [A procedure in an] The electric power plant according to claim 54, wherein the electric machine comprises [comprising] at least one rotary electric machine [(2, 4, 6, 8)] of alternating current type [designed to be connected] for connection directly to a distribution or transmission network and comprising at least one electric winding, as well as an auxiliary power generator connected to an auxiliary power busbar, [characterized in that] wherein the winding of the machine [(2, 4, 6, 8)] is formed of at least one electric conductor [(35)], a first layer [(13)] with semiconducting properties surrounding the conductor, a solid insulating layer [(37)] surrounding the first layer and a second layer [(15)] with semiconducting properties surrounding the insulating layer, and [in that] wherein the power flow is controlled optionally from the auxiliary

power generator to the auxiliary power busbar or from the auxiliary power busbar to the auxiliary power generator.

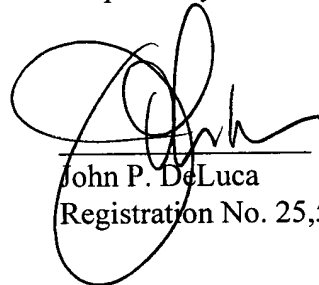
Claim 60. (Amended) [A procedure in an] The electric power plant [comprising] according to claim 54, wherein the electric machine comprises at least one synchronous machine [(2, 4, 6, 8) designed to be connected] for connection directly to a distribution or transmission network and comprising at least one electric winding, [characterized in that] wherein the winding of the machine [(2, 4, 6, 8)] is formed of at least one electric conductor [(35)], a first layer [(13)] with semiconducting properties surrounding the conductor, a solid insulating layer [(37)] surrounding the first layer and a second layer [(15)] with semiconducting properties surrounding the insulating layer, and in that the field winding of the machine is short-circuited and an auxiliary winding of the machine is supplied with a three-phase voltage having a phase position and a frequency such that the machine functions as an asynchronous machine with a direction of rotation for maximum braking torque.

REMARKS

Applicants have amended the claims in order to delete the multiple dependencies therefrom and to place them in better U.S. format. In the event that any multiple dependencies remain in the claims, it is respectfully requested that said multiple dependencies be deleted and reference be made to the immediately preceding claim.

Examination on the merits is earnestly solicited.

Respectfully submitted,



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